

What is claimed is:

1. A high oleic acid triglyceride composition comprising fatty acid components of
 - at least 75% oleic acid
 - less than 10% diunsaturated fatty acid component C16-C22;
 - less than 3% triunsaturated fatty acid C16-C22 component; and
 - less than 8% saturated fatty acid component C16-C22; andwherein said composition is further characterized by the properties of:
 - a dielectric strength of at least 35 KV/100 mil gap
 - a dissipation factor of less than 0.05% at 25NC
 - acidity of less than 0.03 mg KOH/g
 - electrical conductivity of less than 1 pS/m at 25NC
 - a flash point of at least 250NC and
 - a pour point of at least -15NC.
2. The high oleic acid triglyceride composition of claim 1 comprising fatty acid components of
 - at least 75% oleic acid
 - less than 10% linoleic acid
 - less than 3% linolenic acid
 - less than 4% stearic acid, and
 - less than 4% palmitic acid.
3. The high oleic acid triglyceride composition of claim 2 wherein said composition is further characterized by the properties of:
 - a dielectric strength of at least 40 KV/100 mil gap,
 - a dissipation factor of less than 0.02% at 25NC,
 - acidity of less than 0.02 mg KOH/g,
 - electrical conductivity of less than .25 pS/m at 25NC,
 - a flash point of at least 300NC, and
 - a pour point of at least -20NC.

4. The high oleic acid triglyceride composition of claim 3 wherein said composition is further characterized by a pour point of at least -40NC.

5. The high oleic acid triglyceride composition of claim 1 comprising fatty acid components of

at least 75% oleic acid

less than 10% linoleic acid

less than 3% linolenic acid

less than 4% stearic acid, and

less than 4% palmitic acid

wherein said composition is further characterized by the properties of:

a dielectric strength of at least 40 KV/100 mil gap,

a dissipation factor of less than 0.02% at 25NC,

acidity of less than 0.02 mg KOH/g,

electrical conductivity of less than .25 pS/m at 25NC,

a flash point of at least 300NC, and

a pour point of at least -20NC.

6. The high oleic acid triglyceride composition of claim 5 wherein said composition is further characterized by a pour point of at least -40NC.

7. An electrical insulation fluid comprising:

at least 75% of the high oleic acid triglyceride composition of claim 1

0.1-3% antioxidant additive.

8. The electrical insulation fluid of claim 7 wherein said antioxidant additive is selected from the group consisting of butylated hydroxy toluene, butylated hydroxy anisole and mono-tertiary butyl hydro quinone.

9. The electrical insulation fluid of claim 7 wherein said antioxidant additive is mono-

ter a hydro quinone.

10. The electrical insulation fluid of claim 9 comprising up to 2% mono-tetra hydro quinone.
11. The electrical insulation fluid of claim 7 comprising at least 94% of the high oleic acid triglyceride composition.
12. The electrical insulation fluid of claim 7 further comprising a pour point depressant additive.
13. The electrical insulation fluid of claim 12 wherein said pour point depressant is polymethacrylate.
14. The electrical insulation fluid of claim 7 further comprising a copper deactivator additive, said electrical insulation fluid comprising less than 1% of said copper deactivator.
15. The electrical insulation fluid of claim 7 wherein said copper deactivator is a benzotriazole derivative.
16. The electrical insulation fluid of claim 7 further comprising up to 25% of mineral oil, synthetic esters, synthetic hydrocarbons and combinations thereof.
17. The electrical insulation fluid of claim 16 comprising 3-20% mineral oil, synthetic esters and/or synthetic hydrocarbons.
18. The electrical insulation fluid of claim 17 comprising 5-15% mineral oil, synthetic esters and/or synthetic hydrocarbons.
19. The electrical insulation fluid of claim 18 comprising 5-15% synthetic esters and/or

synthetic hydrocarbons.

20. An electrical apparatus comprising the electrical insulation fluid of claim 7.

21. The electrical apparatus of claim 20 wherein said apparatus is an electrical transformer, an electrical capacitor or an electrical power cable.

22. The electrical insulation fluid of claim 7 comprising 0.2-2.0% of a combination of IRGANOX L-57 antioxidant, IRGANOX L-109 antioxidant and IRGAMET-30 metal deactivator, said combination having a ratio of about 1 part IRGANOX L-57 antioxidant to 2-4 parts IRGANOX L-109 antioxidant to about 1 part IRGAMET-30 metal deactivator

23. The electrical insulation fluid of claim 22 wherein said electrical insulation fluid is further characterized by a pour point of at least -40NC.

24. The electrical insulation fluid of claim 22 comprising 0.5-1.0% of said combination of IRGANOX L-57 antioxidant, IRGANOX L-109 antioxidant and IRGAMET-30 metal deactivator.

25. The electrical insulation fluid of claim 24 wherein said combination of IRGANOX L-57 antioxidant, IRGANOX L-109 antioxidant and IRGAMET-30 metal deactivator has a ratio of about 1 part IRGANOX L-57 antioxidant to about 3 parts IRGANOX L-109 antioxidant to about 1 part IRGAMET-30 metal deactivator.

26. The electrical insulation fluid of claim 22 wherein said combination of IRGANOX L-57 antioxidant, IRGANOX L-109 antioxidant and IRGAMET-30 metal deactivator has a ratio of about 1 part IRGANOX L-57 antioxidant to about 3 parts IRGANOX L-109 antioxidant to about 1 part IRGAMET-30 metal deactivator.

27. The electrical insulation fluid of claim 22 comprising about 0.5% of said combination of IRGANOX L-57 antioxidant, IRGANOX L-109 antioxidant and IRGAMET-30 metal deactivator.

28. The electrical insulation fluid of claim 27 comprising fatty acid components of
at least 75% oleic acid
less than 10% linoleic acid
less than 3% linolenic acid
less than 4% stearic acid, and
less than 4% palmitic acid

wherein said composition is further characterized by the properties of:

a dielectric strength of at least 40 KV/100 mil gap,
a dissipation factor of less than 0.02% at 25NC,
acidity of less than 0.02 mg KOH/g,
electrical conductivity of less than .25 pS/m at 25NC,
a flash point of at least 300NC, and
a pour point of at least -20NC.

29. The electrical insulation fluid of claim 28 wherein said composition is further characterized by a pour point of at least -40NC.

30. The electrical insulation fluid of claim 28 comprising at least 94% of the high oleic acid triglyceride composition.

31. The electrical insulation fluid of claim 30 further comprising a pour point depressant additive.

32. The electrical insulation fluid of claim 31 wherein said pour point depressant is polymethacrylate.

33. The electrical insulation fluid of claim 22 comprising about 0.5% of said combination of IRGANOX L-57 antioxidant, IRGANOX L-109 antioxidant and IRGAMET-30 metal deactivator.
34. The electrical insulation fluid of claim 22 further comprising a pour point depressant additive.
35. The electrical insulation fluid of claim 34 wherein said pour point depressant is polymethacrylate.
36. The electrical insulation fluid of claim 22 further comprising 1-24% mineral oil, synthetic esters and/or synthetic hydrocarbons.
37. The electrical insulation fluid of claim 36 comprising 3-30% mineral oil, synthetic esters and/or synthetic hydrocarbons.
38. The electrical insulation fluid of claim 37 comprising 5-15% mineral oil, synthetic esters and/or synthetic hydrocarbons.
39. The electrical insulation fluid of claim 38 comprising 5-15% synthetic esters and/or synthetic hydrocarbons.
40. An electrical apparatus comprising the electrical insulation fluid of claim 22.
41. The electrical apparatus of claim 40 wherein said apparatus is an electrical transformer, an electrical capacitor or an electrical power cable.
42. An electrical apparatus comprising the electrical insulation fluid of claim 28.
43. A process for preparing the high oleic acid triglyceride composition of claim 1

comprising the steps of:

 mixing 10 parts refined, bleached and deodorized high oleic acid triglyceride with 1 part or less by weight neutral clay to form a mixture
 maintaining said mixture for at least about 20 minutes, and
 filtering said mixture to remove said clay.

44. The process of claim 43 wherein said clay is 30/60 mesh size clay.